CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/W.No.07/KRIDL/CEMENT/2014-15

Date: 05.06.2014

TEST REPORT

CLIENT	:	**Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.
AGENCY	:	**Technical Manager**, KRIDL, Bangalore.
NAME OF THE WORK	:	Improvements of Roads (UGD Laying Roads) and Drains in Chinnappa Layout, Mariyannapalya in Ward No.07 Byatarayanapura, BBMP, Bangalore.
REFERENCE	:	AEE/(KOD.SUB.DIV)/ /2014-15 Dated: 03.06.2014
SAMPLE ID	:	Cement
SAMPLES SUPPLIED BY	:	AGENCY

The results of the tests conducted on the cement sample are as follows:

Sl.No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-1989
1	a) Initial Setting Time	IS-4031 (Part -5)	150 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5)	485 Minutes	Not More than 600 Minutes
2	Soundness	IS-4031 (Part 3) by the Le-Chatelier method	1 mm	Not more than 10 mm
3	Standard Consistency	IS-4031 (Part -4)	26.00 %	-

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Job No.: CTCE/BBMP/W.No.07/KRIDL/SAND/2014-15 : 05.06.2014

TEST REPORT ON FINE AGGREGATES (SAND)
IS 383-1970 (RA- 2002)

Client : **Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.

Agency : **Technical Manager,** KRIDL, Bangalore.

Name of Work : Improvements of Roads (UGD Laying Roads) and Drains in Chinnappa Layout, Mariyannapalya in Ward No.07 Byatarayanapura, BBMP, Bangalore.

Reference : AEE/(KOD.SUB.DIV)/ /2014-15 Dated: 03.06.2014

Date of Testing : 05.06.2014

Material : Sand Total Wt. of Aggregates in gms **2000**

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits For Zone-II
10	0	0	0	100	100
4.75	97	4.85	4.85	95.2	90-100
2.36	212	10.60	15.45	84.6	75-100
1.18	503	25.15	40.60	59.4	55-90
600 Micron	425	21.25	61.85	38.2	35-59
300 Micron	497	24.85	86.70	13.3	8-30
150 Micron	213	10.65	97.35	2.7	0-10

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Job No.: CTCE/BBMP/W.No.07/KRIDL/AGG/2014-15 : 05.06.2014

TEST REPORT ON COARSE AGGREGATES
IS 383-1970 (RA- 2002)

Client : **Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.

Agency : **Technical Manager,** KRIDL, Bangalore.

Name of Work : Improvements of Roads (UGD Laying Roads) and Drains in Chinnappa Layout, Mariyannapalya in Ward No.07 Byatarayanapura, BBMP, Bangalore.

Reference : AEE/(KOD.SUB.DIV)/ /2014-15 Dated: 03.06.2014

Date of Testing : 05.06.2014

Material : 40mm Aggregates

Total Wt. of Aggregates in gms **26000**

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits
80	0	0	0	100	100
40	1008	3.88	3.88	96.12	95-100
20	15645	60.17	64.05	35.95	30-70
10	6132	23.58	87.63	12.37	10-35
4.75	2745	10.56	98.19	1.81	0-5

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Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/W.No.07/KRIDL/STEEL/2014-15 05.06.2014

TEST REPORT ON REINFORCEMENT STEEL

Client : **Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.

Agency : **Technical Manager**, KRIDL, Bangalore.

Name of the work : Improvements of Roads (UGD Laying Roads) and Drains in Chinnappa Layout, Mariyannapalya in Ward No.07 Byatarayanapura, BBMP, Bangalore.

Reference : AEE/(KOD.SUB.DIV)/ /2014-15 Dated: 03.06.2014

Date of Test : 05.06.2014

Technical Reference : IS: 1786-2008

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm²	Tensile strength (Ultimate stress) N/mm²	Elongation percent gauge length		
1	10	0.62	513	550	13.20	O.K	O.K

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NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/W.No.07/KRIDL/CUBE/2014-15 17.07.2014

TEST REPORT ON CONCRETE CUBES

Client	: **Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.
Agency	: **Technical Manager,** KRIDL, Bangalore.
Name of the work	: Improvements of Roads (UGD Laying Roads) and Drains in Chinnappa Layout, Mariyannapalya in Ward No.07 Byatarayanapura, BBMP, Bangalore.
Reference	: AEE/(KOD.SUB.DIV)/ /2014-15 Dated: 03.06.2014
Sample ID	: Drain Concrete
Size of cubes	: 150mmx150mmx150mm
Cross Sectional Area	: 22500 mm^2
Technical Reference	: IS: 516-1959 (Reaffirmed 2008)
Grade of Concrete	: M_{20}
Compressive Strength as on	: 28^{th} day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	19.06.2014	17.07.2014	8.294	488.6	21.72
2	19.06.2014	17.07.2014	8.375	512.4	22.77
3	19.06.2014	17.07.2014	8.462	525.8	23.37

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NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/W.No.07/KRIDL/WMM/Gradation/2014-15

04.07.2014

GRADATION FOR WMM
MORTH TABLE-400-11

Client : **Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.

Agency : **Technical Manager,** KRIDL, Bangalore.

Name of Work : Improvements of Roads (UGD Laying Roads) and Drains in Chinnappa Layout, Mariyannapalya in Ward No.07 Byatarayanapura, BBMP, Bangalore.

Reference : AEE/(KOD.SUB.DIV)/ /2014-15 Dated: 03.06.2014

Date of Testing : 04.07.2014

Material : WMM

Sample Location : WMM Mix Plant

Oven Dry Wt (gm): **25000**

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	985	985	3.9	96.1	95-100
22.4	6130	7115	28.5	71.5	60-80
11.2	5285	12400	49.6	50.4	40-60
4.75	4160	16560	66.2	33.8	25-40
2.36	3485	20045	80.2	19.8	15-30
0.600	2290	22335	89.3	10.7	8-22
0.075	2380	24715	98.9	1.1	0-8

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Job No.: CTCE/BBMP/W.No.07/KRIDL/SDBC/Bitumen/2014-15 15.07.2014

BITUMEN CONTENT AND GRADATION DETERMINATION OF SEMI DENSE BITUMINOUS CONCRETE MIX

AASHTO T 164 & AASHTO T 30

CLIENT	**Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.
AGENCY	**Technical Manager,** KRIDL, Bangalore.
NAME OF THE WORK	Improvements of Roads (UGD Laying Roads) and Drains in Chinnappa Layout, Mariyannapalya in Ward No.07 Byatarayanapura, BBMP, Bangalore.
REFERENCE	AEE/(KOD.SUB.DIV)/ /2014-15 Dated: 03.06.2014
SAMPLE I/D	Roads and Drains in Chinnappa Layout, Mariyannapalya in Ward No.07
DATE OF TESTING	15.07.2014

BITUMEN CONTENT DETERMINATION

Description	Trail 1	Trail 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	475	476
3. Weight of Asphalt and Mineral matter Extracted,	-	-
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	25	24.00
7. Bitumen content in %	5.00	4.80
8. Average	**4.90**	

GRADATION AFTER EXTRACTION

SIEVE SIZE	Trail 1				JOBMIX
mm	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	Gradation
13.2	0	0	0	100	100
9.5	35.62	7.50	7.50	92.50	90-100
4.75	245.2	51.62	59.12	40.88	35-51
2.36	36.97	7.78	66.90	33.10	24-39
1.18	65.74	13.84	80.74	19.26	15-30
0.3	42.56	8.96	89.70	10.30	9-19
0.075	28.63	6.03	95.73	4.27	3-8

SIEVE SIZE	Trail 2				JOBMIX
mm	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	Gradation
13.2	0	0	0	100	100
9.5	34.58	6.92	6.92	93.08	90-100
4.75	251.3	50.26	57.18	42.82	35-51
2.36	28.74	5.75	62.92	37.08	24-39
1.18	75.46	15.09	78.02	21.98	15-30
0.3	53.29	10.66	88.67	11.33	9-19
0.075	34.52	6.90	95.58	4.42	3-8

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